APPENDIX A

PENDING CLAIMS

1. (Currently Amended) A method of increasing the efficiency of transfection of cycling cells sensitive to electromagnetic radiation, comprising:

synchronizing said cells by contacting said cells with electromagnetic radiation, wherein said electromagnetic radiation is a member selected from the group consisting of: Gamma rays, X-rays, and ultraviolet rays and

transfecting said cells within about one cell cycle with a nucleic acid that encodes a desired gene product,

wherein said efficiency of transfection is increased at least about fivefold over cells not contacted with said electromagnetic radiation.

2. (Currently amended) A method of claim 1 wherein said electromagnetic radiation synchronizes cells at a stage of the cell cycle when the nuclear membrane is substantially degraded.

3. (Currently amended) A method of claim 1 wherein said electromagnetic radiation synchronizes cells at late S phase.

4. (Currently amended) A method of claim 1 wherein said electromagnetic radiation synchronizes cells at the G_2/M phase boundary.

5. (Currently amended) A method of claim 1 wherein said electromagnetic radiation synchronizes cells at a stage other than M phase, and the nucleic acid accumulates in cells that have cycled to the G_2/M phase boundary.

7. (Previously presented) A method of claim 1 wherein said gene product is foreign to said cells.

8. (Previously presented) A method of claim 1 wherein said gene product is toxic to said cells.

9. (Previously presented) A method of claim 8 wherein said gene product induces apoptosis.

10. (Previously presented) A method of claim 1 wherein said nucleic acid is fully encapsulated in a lipid-nucleic acid particle.

12. (Currently amended) The method of claim 1, wherein said electromagnetic radiation is X-rays.

46. (Previously presented) The method of claim 1, wherein said cells are present within a mammal.